

IN THE CLAIMS

Please amend the claims as follows:

1. (Original) A process for the preparation of water insoluble, bio-release iron-manganese polyphosphate fertilizer, which comprises
 - a) heating phosphoric acid at a temperature of at least 160°C with a mixture of (i) source of iron oxide such as goethite and hematite, (ii) pyrolusite and (iii) one or more basic compound(s) selected from oxide(s) or carbonate(s) of magnesium, calcium, sodium and potassium, for a time period ranging from 20 min to 2 hr, thereby producing a liquid which has an appropriate degree of incomplete polymerization as characterized by its chemical properties, followed by
 - b) neutralization of the liquid polyphosphate then
 - c) drying the neutralized material to obtain a solid and
 - d) pulverization.

2. (Original) A process as claimed in claim 1 wherein the iron oxide and pyrolusite are used in any of the molar ratios $\text{Fe} : \text{Mn} = 1 : 0.1$ to $0.1 : 1$.

3. (Original) A process as claimed in claim 1 wherein if the basic compounds used are oxides or carbonates of magnesium or calcium, the molar ratios of Fe : Mg/Ca may be anywhere between 1 : 0.6 to 1 : 1.75.

4. (Original) A process as claimed in claim 1 wherein if the basic compounds used are oxides or carbonates of sodium or potassium, the molar ratios of Fe : Na/K may be anywhere between 1 : 1.2 to 1 : 3.5.

5. (Original) A process as claimed in claim 3 wherein the basic compound is the oxide or carbonate of magnesium.

6. (Original) A process as claimed in claim 1 wherein phosphoric acid of strength up to 60% P₂O₅ is used for the reaction.

7. (Currently amended) A process as claimed in claim 1 ~~claims 1 to 6~~ wherein phosphoric acid used is equal to or greater than that required to convert all cations in the reaction mixture to the dihydrogen orthophosphates.

8. (Original) A process as claimed in claim 1 wherein the polymerization reaction (a) is carried out at a temperature of 200-250°C.

9. (Currently amended) A process as claimed in claim 1 ~~claims 1 and 8~~ wherein the extent of polymerization is judged by chemical tests of the solubility in organic chelates selected from citrate, DTPA or EDTA.

10. (Original) A process as claimed in claim 1 wherein the liquid polyphosphate product is neutralized with a base to any pH within 3 to 9.5.

11. (Original) A process as claimed in claim 1 stage (b) wherein the base for neutralization is selected from magnesia, magnesium carbonate, lime and ammonia.

12. (Original) A process as claimed in claim 11 wherein the base for neutralization is ammonia.

13. (Original) A process as claimed in claim 1 wherein the neutralized polyphosphate is dried to a solid form at temperatures not exceeding 100°C.

14. (Original) A process as claimed in claim 13 wherein the dried solid is pulverized to a powdery form.

15. (Original) A solid, water insoluble fertilizer which is a ferric manganic magnesium ammonium polyphosphate, where the magnesium may be replaced by

calcium, sodium or potassium and the ammonium may be replaced by magnesium, calcium, sodium or potassium, where the polyphosphate is only partially polymerized, and which possesses the property of high solubility in organic chelates such as citrate, DTPA or EDTA and thereby contains nutrients in plant available form.

16. (New) A process as claimed in claim 2 wherein phosphoric acid used is equal to or greater than that required to convert all cations in the reaction mixture to the dihydrogen orthophosphates.

17. (New) A process as claimed in claim 3 wherein phosphoric acid used is equal to or greater than that required to convert all cations in the reaction mixture to the dihydrogen orthophosphates.

18. (New) A process as claimed in claim 4 wherein phosphoric acid used is equal to or greater than that required to convert all cations in the reaction mixture to the dihydrogen orthophosphates.

19. (New) A process as claimed in claim 5 wherein phosphoric acid used is equal to or greater than that required to convert all cations in the reaction mixture to the dihydrogen orthophosphates.

20. (New) A process as claimed in claim 6 wherein phosphoric acid used is equal to or greater than that required to convert all cations in the reaction mixture to the dihydrogen orthophosphates.

21. (New) A process as claimed in claim 8 wherein the extent of polymerization is judged by chemical tests of the solubility in organic chelates selected from citrate, DTPA or EDTA.